Rocky Flats Environmental Technology Site

TYPE 1
RECONNAISSANCE LEVEL CHARACTERIZATION REPORT (RLCR)

BUILDING T131A

REVISION 0

March 10, 2003

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March 10, 2003

Reviewed by: _____ Date: 3-10-03
Don Risoli, Quality Assurance

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ATTACHMENTS

ABBREVIATIONS/ACRONYMS

ACM	Asbestos containing material
Be	Beryllium
CDPHE	Colorado Department of Public Health and the Environment
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act
$DCGL_{EMC}$	Derived Concentration Guideline Level – elevated measurement comparison
$DCGL_W$	Derived Concentration Guideline Level – Wilcoxon Rank Sum Test
D&D	Decontamination and Decommissioning
DDCP	Decontamination and Decommissioning Characterization Protocol
DOE	U.S. Department of Energy
DPP	Decommissioning Program Plan
DQA	Data quality assessment
DQOs	Data quality objectives
EPA	U.S. Environmental Protection Agency
FDPM	Facility Disposition Program Manual
HVAC	Heating, ventilation, air conditioning
HSAR	Historical Site Assessment Report
IHSS	Individual Hazardous Substance Site
IWCP	Integrated Work Control Package
K-H	Kaiser-Hill
LBP	Lead-based paint
LLW	Low-level waste
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
NORM	Naturally occurring radioactive material
NRA	Non-Rad-Added Verification
OSHA	Occupational Safety and Health Administration
PARCC	Precision, accuracy, representativeness, comparability and completeness
PCBs	Polychlorinated Biphenyls
PDS	Pre-demolition survey
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS	Rocky Flats Environmental Technology Site
RFFO	Rocky Flats Field Office
RLC	Reconnaissance Level Characterization
RLCR	Reconnaissance Level Characterization Report
RSP	Radiological Safety Practices
SVOCs	Semi-volatile organic compounds
TCLP	Toxicity Characteristic Leaching Procedure
TSA	Total surface activity
VOCs	Volatile organic compounds

EXECUTIVE SUMMARY

A Reconnaissance Level Characterization (RLC) was performed to enable facility "Typing" per the DPP (10/8/98) and compliant disposition and waste management for Building T131A. Because this facility is an anticipated Type 1 facility, the characterization was performed in accordance with the Pre-Demolition Survey Plan (MAN-127-PDSP) requirements. All facility surfaces were characterized in this RLC, including the interior and exterior surfaces (i.e., equipment, floor, walls, ceiling and roof). Environmental media beneath and surrounding the facility was not within the scope of this RLCR and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

The RLC encompassed both radiological and chemical characterization to enable compliant disposition and waste management pursuant to the D&D Characterization Protocol (MAN-077-DDCP). The characterization built upon physical, chemical and radiological hazards identified in the facility-specific Historical Site Assessment Report.

Results indicate that no radiological contamination exists in excess of the PDSP unrestricted release limits of DOE Order 5400.5. No friable or non-friable asbestos containing building materials were identified in Building T131A. All beryllium sample results were less than 0.1 $\mu g/100cm^2$. Fluorescent light ballasts may contain PCBs. PCB ballasts will be managed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations. Demolition debris will be managed in compliance with regulations governing PCBs (40 CFR 761), and Environmental Compliance Guidance #27, *Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal,* as applicable.

Based upon this RLCR, Building T131A is considered a Type 1 facility and can be demolished or sold to offsite commerce. To ensure this facility remains free of contamination and RLC data remain valid, Level 2 isolation controls have been established, and the facility posted accordingly.

1 INTRODUCTION

A Reconnaissance Level Characterization (RLC) was performed to enable compliant disposition and waste management Building T131A. Because this facility is an anticipated Type 1 facility, a PDS characterization was performed. All facility surfaces were characterized in this RLC, including the interior and exterior surfaces of the facilities (i.e., equipment, floor, walls, ceiling and roof). Environmental media beneath and surrounding the facility was not within the scope of this RLC Report (RLCR) and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

As part of the Rocky Flats Environmental Technology Site (RFETS) Closure Project, numerous facilities will be removed, among these is Building T131A. The location of this facility is shown in Attachment A, *Facility Location Map*. This facility no longer supports the RFETS mission and requires removal in order to reduce Site infrastructure, risks and/or operating costs.

Before this facility can be removed, a Pre-Demolition Survey (PDS) must be conducted; this document presents the PDS results. The PDS was conducted pursuant to the Decontamination and Decommissioning Characterization Protocol (MAN-077-DDCP) and the Pre-Demolition Survey Plan for D&D Facilities (MAN-127-PDSP). The PDS built upon physical, chemical and radiological hazards identified in the facility-specific Historical Site Assessment Report (HSAR).

1.1 Purpose

The purpose of this report is to communicate and document the results of the RLC effort. An RLC is performed before Type 1 building demolition to define the pre-demolition radiological and chemical conditions of a facility. Pre-demolition conditions are compared with the unrestricted release limits for radiological and non-radiological contaminants. RLC results will enable project personnel to make final disposition decisions, develop related worker health and safety controls, and estimate waste volumes by waste types.

1.2 Scope

This report presents the pre-demolition radiological and chemical conditions of Building T131A. Environmental media beneath and surrounding the facility are not within the scope of this RLCR and will be addressed using the Soil Disturbance Permit process and in compliance with RFCA.

1.3 Data Quality Objectives

The Data Quality Objectives (DQOs) used in designing this RLC were the same DQOs identified in the Pre-Demolition survey Plan for D&D Facilities (MAN-127-PDSP.) Refer to section 2.0 of MAN-127-PDSP for these DQOs.

2 HISTORICAL SITE ASSESSMENT

A Facility-specific Historical Site Assessment (HSA) was conducted to understand the facility histories and related hazards. The assessment consisted of facility walk downs, interviews, and document review, including review of the Historical Release Report (refer to the D&D Characterization Protocol, MAN-077-DDCP). Results were used to identify data gaps and needs, and to develop radiological and chemical characterization plans. Results of the facility-specific HSA were documented in a facility-specific *Historical Site Assessment Report (HSAR) for Area 5, Group 5 facilities,* dated September, 2002, Revision 0. (Refer to Attachment B, *Historical Site Assessment Report.*) In summary, the HSAR identified minimal potential for radiological or chemical hazards; however, asbestos containing materials and PCBs in paint and light ballasts are possible.

3 RADIOLOGICAL CHARACTERIZATION AND HAZARDS

Building T131A was characterized for radiological hazards per the PDSP. Radiological characterization was performed to define the nature and extent of radioactive materials that may be present on the facility surfaces. Measurements were performed to evaluate the contaminants of concern. Based upon a review of historical and process knowledge, building walk downs, and MARSSIM guidance, a Radiological Characterization Plan was developed during the planning phase that describe the minimum survey requirements (refer to the RISS Characterization Project files).

Two radiological survey packages were developed for the interior and exterior of the Building T131A, including fixed equipment. The survey packages were developed in accordance with Radiological Safety Practices (RSP) 16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation and Closure.* Total surface activity (TSA), removable surface activity (RSA), media samples, and scan measurements were collected in accordance with RSP 16.02 *Radiological Surveys of Surfaces and Structures.* Radiological survey data were verified, validated and evaluated in accordance with RSP 16.04, *Radiological Survey/Sample Data Analysis.* Quality control measures were implemented relative to the survey process in accordance with RSP 16.05, *Radiological Survey/Sample Quality Control.* Radiological survey data, statistical analysis results, and survey locations are presented in Attachment C, *Radiological Data Summary and Survey Maps.* The radiological survey unit packages are maintained in the RISS Characterization Project files.

Twenty-seven (27) TSA measurements (15 random, 5 biased, 5 equipment and 2 QC) and twenty-five (25) RSA measurements (15 random, 5 biased, and 5 equipment) were performed; and a minimum 5% of the facility interior surfaces were scanned. The RLC data confirmed that the facilities do not contain radiological contamination above the surface contamination guidelines provided in the PDSP. Radiological survey data, statistical analysis results, and survey locations are presented in Attachment C, *Radiological Data Summary and Survey Maps.* The radiological survey unit packages are maintained in the RISS Characterization Project files. Level 2 isolation control postings are displayed on the buildings to ensure no radioactive materials are inadvertently introduced.

The exterior radiological surveys for Building T131A was performed as part of the RISS West Side Exterior PDS strategy effort (authorized by Department of Energy letter, *02-DOE-01598*, dated December 13th, 2002 and approved by CDPHE letter, *RE: Proposed Deviations From The Pre-Demolition Survey Plan (PDSP)*, dated January 27, 2003; refer to the RISS Characterization Project Files for letter copies). The RISS West Side exterior building radiological surveys and locations can be found in survey unit package EXT-B-001, *RISS West Side Building Exteriors*. Two (2) biased TSA measurements, two (2) biased RSA measurements, and a one (1) square meter scan at each of the two TSA/RSA locations were performed at biased locations on the exterior surfaces of T131A. In addition, one (1) biased TSA measurement, one (1) biased RSA measurement, and 10 percent scan surveys were performed on the stairs, ramps, handrails and exterior door surfaces of building T131A. The RLC data collected in exterior survey unit package EXT-B-001 confirmed that the exterior surfaces of T131A do not contain radiological contamination above the surface contamination guidelines provided in the PDSP. Radiological survey data, statistical analysis results, and survey map locations for the West-Side Exterior survey unit package EXT-B-001 are maintained in the RISS Characterization Project files.

4 CHEMICAL CHARACTERIZATION AND HAZARDS

Building T131A was characterized for chemical hazards per the PDSP. Chemical characterization was performed to determine the nature and extent of chemical contamination that may be present on, or in these facilities. Based upon a review of historical and process knowledge, visual inspections, and PDSP DQOs, additional sampling needs were determined. A Chemical Characterization Plan (refer to RISS Characterization Project files) was developed during the planning phase that describes sampling requirements, the justification for the sample locations and estimated sample numbers. Contaminants of concern included asbestos, beryllium, RCRA/CERCLA constituents, lead and PCBs. Refer to Attachment D, *Chemical Data Summaries and Sample Maps*, for details on sample results and sample locations.

4.1 Asbestos

A survey of building materials suspected of containing asbestos was conducted in the aforementioned buildings in accordance with the RLCP. A CDPHE-certified asbestos inspector conducted the inspection and sampling in accordance with the *Asbestos Characterization Protocol, PRO-563-ACPR, Revision 1.* Building materials suspected of containing asbestos were identified for sampling at the discretion of the inspector.

A comprehensive, invasive asbestos inspection was conducted to determine the presence of friable and non-friable asbestos containing building materials. All bulk samples of building materials suspected of containing asbestos were negative ("None Detected"). Asbestos laboratory analysis data and sample location maps are contained in Attachment D, *Chemical Data Summaries and Sample Maps.*

4.2 Beryllium (Be)

Based on the HSAR and personnel interviews, this building is an anticipated Type 1 facility. There was not, however, adequate historical and process knowledge to conclude that beryllium was not used or stored in this building. Therefore, biased beryllium sampling was performed in accordance with the PDSP and the *Beryllium Characterization Procedure, PRO-536-BCPR, Revision 0, September 9, 1999.* Biased sample locations corresponded with the most probable areas of dust accumulation (including beryllium dust), assuming airborne deposition.

All beryllium smear sample results were less than 0.1 $\mu g/100cm^2$. Beryllium laboratory sample data and location maps are contained in Attachment D, *Chemical Data Summaries and Sample Maps*.

4.3 RCRA/CERCLA Constituents [including metals and volatile organic compounds (VOCs)]

Based on a review of the HSAR and facility walk downs, Building T131A does not have a history of RCRA/CERCLA constituents, therefore, sampling was not performed as part of this RLC effort.

Sampling for lead in paint in Building T131A was not performed. Environmental Waste Compliance Guidance #27, *Lead-based Paint (LBP) and Lead-based paint Debris Disposal*, states that LBP debris generated outside of currently identified high contamination areas shall be managed as non-hazardous (solid) wastes, and additional analysis for characteristics of hazardous waste derived from LBP is not a requirement for disposal.

Building T131A may contain RCRA regulated materials such as mercury switches and fluorescent lamps. A thorough inspection of the facility will be made, and all regulated materials will be removed prior to demolition.

4.4 Polychlorinated Biphenyls (PCBs)

Based on a review of the HSAR and a facility walk down, no PCBs were used in Building T131A. Based on the age of the building (constructed after 1980), paint is not expected to contain PCBs.

Because T131A may contain fluorescent light ballasts containing PCBs, fluorescent light fixtures will be inspected to identify PCB ballasts during removal operations. PCB ballasts will be identified based on factors such as labeling (e.g., PCB-containing and non PCB-containing), manufacturer, and date of manufacturing. All ballasts that do not indicate non PCB-containing are assumed to be PCB-containing, and all leaking PCB ballasts will be removed prior to demolition.

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5 PHYSICAL HAZARDS

Physical hazards associated with Building T131A are those common to standard industrial environments and include hazards associated with energized systems, utilities, and trips and falls. The building has been relatively well maintained and is in good physical condition, and therefore, does not present hazards associated with building deterioration. Physical hazards are controlled by the Site Occupational Safety and Industrial Hygiene Program, which is based on OSHA regulations, DOE orders, and standard industry practice.

6 DATA QUALITY ASSESSMENT

Data used in making management decisions for decommissioning of Building T131A and consequent waste management are of adequate quality to support the decisions documented in this report. The data presented in this report (Attachments C and D) were verified and validated relative to DOE quality requirements, applicable EPA guidance, and original DQOs of the project.

In summary, the Verification and Validation (V&V) process corroborates that the following elements of the characterization process are adequate:

- the *number* of samples and surveys;
- the *types* of samples and surveys;
- the sampling/survey process as implemented "in the field"; and,
- the laboratory analytical process, relative to accuracy and precision considerations.

Details of the DQA are provided in Attachment E.

7 DECOMMISSIONING WASTE TYPES AND VOLUME ESTIMATES

The demolition and disposal of Building T131A will generate a variety of wastes. Estimated waste types and waste volumes are presented below. All waste can be disposed of as sanitary waste, except PCB Bulk Product Waste. There is no radioactive or hazardous waste. Asbestos and PCB ballasts will be managed pursuant to Site asbestos and PCB abatement and waste management procedures.

Waste Volume Estimates and Material Types

Facility	Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM (cu ft)	Other Waste
T131A	0	700	700	750	800	0	None

8 FACILITY CLASSIFICATION AND CONCLUSIONS

Based on the analysis of radiological, chemical and physical hazards, Building T131A is classified as a RFCA Type 1 facility pursuant to the RFETS Decommissioning Program Plan (DPP; K-H, 1999) and can be demolished or sold to offsite commerce. The Type 1 classification is based on a review of historical and process knowledge, and newly acquired RLC data.

The RLC of Building T131A was performed in accordance with the DDCP and PDSP. All PDSP DQOs were met, and all data satisfied the PDSP DQA criteria. This facility does not contain radiological or hazardous wastes. PCB ballasts will be managed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations. Demolition debris will be managed in compliance with regulations governing PCBs (40 CFR 761), and Environmental Compliance Guidance #27, *Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal,* as applicable. Environmental media beneath and surrounding the facilities will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

To ensure this Type 1 facility remains free of contamination and RLC data remain valid, Level 2 isolation controls have been established, and the facility is posted accordingly.

9 REFERENCES

DOE/RFFO, CDPHE, EPA, 1996. Rocky Flats Cleanup Agreement (RFCA), July 19, 1996.

DOE Order 5400.5, "Radiation Protection of the Public and the Environment."

EPA, 1994. "The Data Quality Objective Process," EPA QA/G-4.

K-H, 1999. Decommissioning Program Plan, June 21, 1999.

MAN-131-QAPM, *Kaiser-Hill Team Quality Assurance Program*, Rev. 1, November 1, 2001.

MAN-076-FDPM, *Facility Disposition Program Manual*, Rev. 3, January 1, 2002.

MAN-077-DDCP, *Decontamination and Decommissioning Characterization Protocol*, Rev. 3, July 15, 2002.

MAN-127-PDSP, *Pre-Demolition Survey Plan for D&D Facilities*, Rev. 1, July 15, 2002.

MARSSIM - Multi-Agency Radiation Survey and Site Investigation Manual, December 1997 (NUREG-1575, EPA 402-R-97-016).

PRO-475-RSP-16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation, and Closure*, Rev. 1, May 22, 2001.

PRO-476-RSP-16.02, *Pre-Demolition (Final Status) Radiological Surveys of Surfaces and Structures*, Rev. 1, May 22, 2001.

PRO-477-RSP-16.03, *Radiological Samples of Building Media*, Rev. 1, May 22, 2001.

PRO-478-RSP-16.04, *Radiological Survey/Sample Data Analysis for Final Status Survey*, Rev. 1, May 22, 2001.

PRO-479-RSP-16.05, *Radiological Survey/Sample Quality Control for Final Status Survey*, Rev. 1, May 22, 2001.

PRO-563-ACPR, Asbestos Characterization Procedure, Revision 0, August 24, 1999.

PRO-536-BCPR, Beryllium Characterization Procedure, Revision 0, August 24, 1999.

RFETS, Environmental Waste Compliance Guidance #25, Management of Polychlorinated Biphenyls (PCBs) in Paint and Other Bulk Product Waste During Facility Disposition.

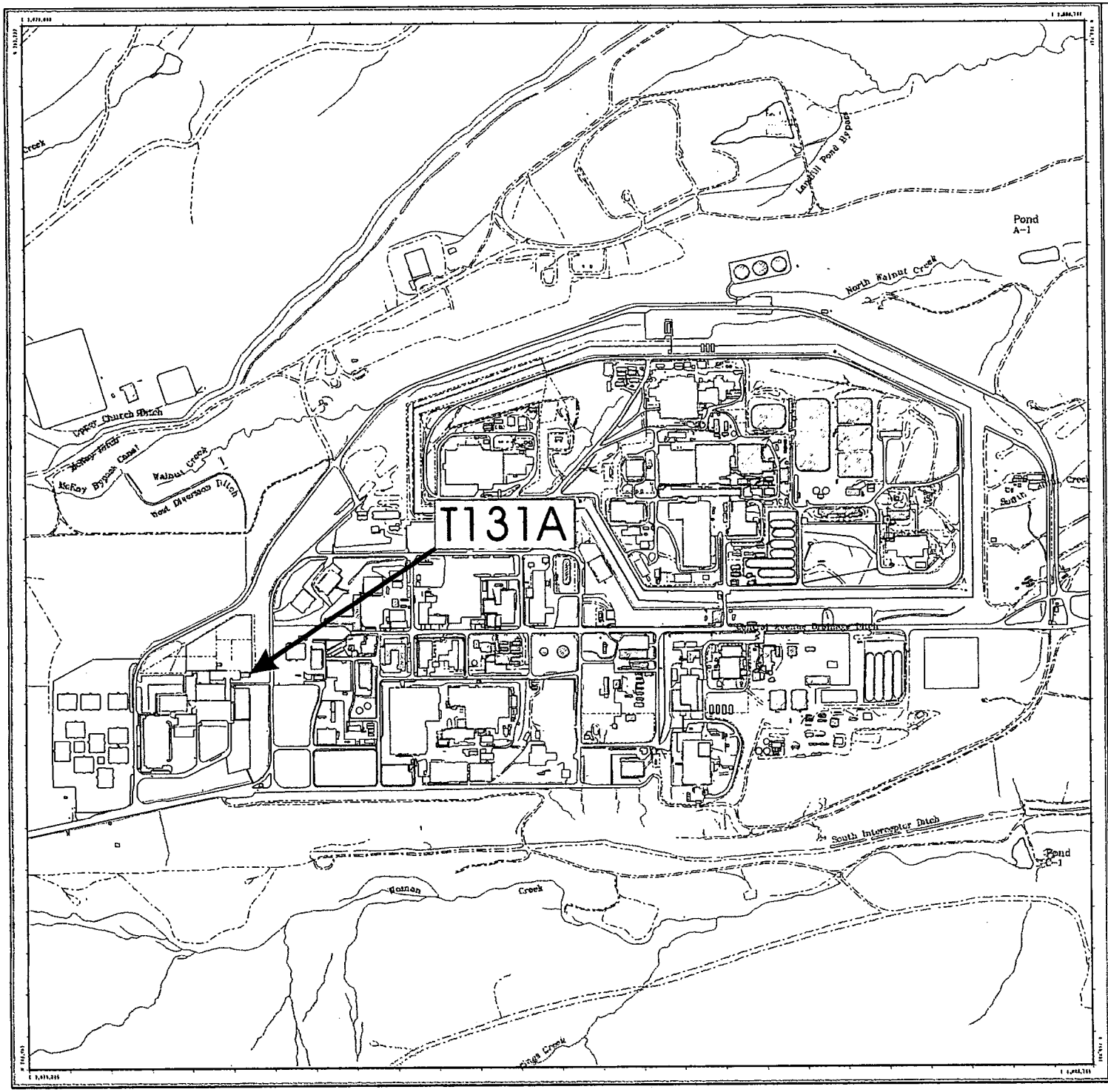
RFETS, Environmental Waste Compliance Guidance #27, Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal.

RFCA Standard Operation Protocol for Recycling Concrete, September 28, 1999.

Historical Site Assessment Report for Area 5, Group 5 Facilities, dated September 2002, Revision 0.

ATTACHMENT A

Facility Location Map



Building Location for T131A

Standard Map Features

- Buildings and other structures
- Demolished buildings and other structures
- Lakes and ponds
- Streams, ditches, or other drainage features
- Fences and other barriers
- Paved roads
- Dirt roads

DATA SOURCE BASE FEATURES:
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G RSL, Las Vegas.
Digitized from the orthophotographs. 1/95

N

Scale = 1 : 12450
1 inch represents approximately 1038 feet

250 0 500 1000 ft

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

GIS Dept. 303-966-7707

Prepared by: CH2MHILL

Prepared for: KAISER-HILL COMPANY

MAP ID: FY 2003

March 7, 2003

M:_Svr w/projects/03-0204/T131A.cdr

ATTACHMENT B

Historical Site Assessment Report

D&D RISS Facility Characterization
Historical Site Assessment Report
September, 2002 Rev. 0

Facility ID: (AREA 5 GROUP 5) Buildings 130, 130 Cafeteria, 130 Warehouse, 131, T131A, T303E, and 130SY.
Anticipated Facility Type (1, 2, or 3): Buildings 130, 130 Cafeteria, 130 Warehouse, 131, T131A, T303E, and 130SY. are anticipated Type 1 facilities.

This facility-specific Historical Site Assessment (HSA) has been performed in accordance with:
D&D Characterization Protocol, RFETS MAN-077-DDCP, latest version, and
Facility Disposition Program Manual, RFETS MAN-076-FDPM, latest version

Physical Description

Building 130 Administrative

Building 130 is a 44,661 square foot, two-story structure built in 1985. The structure is a pre-fabricated building built on a concrete foundation. The above-grade exterior walls are constructed of insulation-filled aluminum panels attached to a steel frame. The roof is constructed of metal decking with built-up roofing. Building 130 is configured with both hard-walled offices and cubical offices. The ceilings are 2-foot by 4-foot acoustical panels with recessed light fixtures. The floors are mostly carpeted with ceramic tile in the bathrooms, and vinyl tile in the supply rooms and janitorial closets.

Building 130 has the following utilities. Electric, plant water, plant sanitary, natural gas, and fire suppression is provided by a water sprinkler system and wall-mounted fire extinguishers.

Building 130 Cafeteria

Building 130 Cafeteria is a 13,317 square foot structure built in 1985. The structure is a pre-fabricated building built on a concrete foundation. The above-grade exterior walls are constructed of insulation-filled aluminum panels attached to a steel frame. The roof is constructed of metal decking with built-up roofing. Building 130 is configured with kitchen and food storage area, a food serving area, and a dinning area. The floors are mostly vinyl tiles.

Building 130 Cafeteria has the following utilities. Electric, plant water, plant sanitary, natural gas, and fire suppression is provided by a water sprinkler system and wall-mounted fire extinguishers.

Building 130 Warehouse

Building 130 Warehouse is a 27,6755 square foot structure built in 1985. The structure is a pre-fabricated building built on a concrete foundation. The above-grade exterior walls are constructed primarily of cement bricks with a steel I-beam frame. The roof is constructed of metal decking with built-up roofing. Building 130 is configured with a large warehouse area, shipping docks, several small hard-walled offices. The floors are primarily sealed concrete and the some offices have carpet.

Building 130 Warehouse has the following utilities. Electric, plant water, plant sanitary, natural gas, and fire suppression is provided by a water sprinkler system and wall-mounted fire extinguishers.

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Building 131

Building 131 is a 22,000 square foot, single-story structure built in 1987. The structure is a pre-fabricated building built on a concrete foundation. The above-grade exterior walls are constructed of insulation-filled aluminum panels attached to a steel frame. The roof is constructed of metal decking with built-up roofing. Building 131 is configured with both hard-walled offices and cubical offices. The ceilings are 2-foot by 4-foot acoustical panels with recessed light fixtures.

Building 131 has the following utilities. Electric, Plant water, plant sanitary, natural gas, and fire suppression is provided by a water sprinkler system and wall-mounted fire extinguishers.

Trailer T131A

Trailer T131A is a 1960 square foot office trailer acquired in 1991. T131A has corrugated metal siding with corrugated metal skirting. The entrances have wooden stairs leading to a wooded enclosure. The interior is configured with both cubicles and hard-walled offices. Interior walls are wallboard. The ceiling is a drop ceiling with acoustical tiles and recessed lights. The floor is primarily covered with carpet.

Trailer T131A has the following utilities: electrical, and fire protection is provided by an overhead sprinkler system and wall mounted fire extinguishers.

Trailer T303E

Trailer T303E is a 210 square foot field office trailer with no official date of purchase. From a physical walk-down of the trailer it appears to have been manufactured in the late 1970's or early 1980s. T303E has corrugated metal siding with no skirting. The trailer is not in service and has no stairs leading to the entrances. Interior walls are wood paneling. The ceiling constructed of a fiberboard with surface mounted lights. The floor is carpeted. . T303E is normally stored in the 130SY Storage Yard when not in us at a short-term field project. Currently this trailer is being stored (and not currently operational) southeast of Building 771.

Trailer T303E has the following utilities: electrical, and fire protection is provided wall mounted fire extinguishers.

130SY StorageYard

The 130SY Storage Yard is a large fenced in storage area with no designated square footage and is located north of Building 130. The storage yard is primarily covered with asphalt, but does has a small gravel area used by KH construction to store construction material and equipment. This storage yard was constructed in approximately 1985 when the 130 warehouse was constructed. Photographs indicate the 130SY Storage Yard was paved with asphalt at approximately the same time as its construction date. The 130SY Storage Yard has no utilities.

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Historical Operations

Building 130 Administrative

The 130 administrative building has always been and an administrative building, which has housed such organizations as project engineering group, the document control, and procurement.

Building 130 Cafeteria

The 130 Cafeteria has always been a cafeteria.

Building 130 Warehouse

The 130 Warehouse is the primary shipping and receiving facility for the Site. Building 130 Warehouse does not act as a storage facility, but receives vender supplied material and then distributed these materials throughout the site. Historically, the building occasionally receives and ships, small quantities of hazardous material, but was not a permitted storage unit and there have been no spills due to this activity. In early September 2002, the Chemical Dispensary was and RCRA Unit 18.03 was also moved to the 130 Warehouse from Building 551.

The 130 Warehouse is also used as the clearinghouse for the site laundry between the generators to the off-site vender for cleaning. The boxes used to transport the dirty laundry are staged in a RMA. There is no building contamination associated with this activity. Also, on the west end of the building a small caged area is labeled as a RMA and is used to stage the occasional radiological source or other low level radiological material that on occasion is shipped though Building 130 Warehouse. From 1985 until the mid 1990's the east end of the warehouse had NDA equipment that was used for quality control inspections on incoming material. In the Mid 1990s this equipment was removed and the area was used to stage laundry going to an outside vender.

Building 131

Building 131 has always been used as an administrative office building. Building 131 originally housed such organizations as DOE, Procurement, site employment, and currently houses site training.

Trailer T131A

Trailer T131A was originally used by the site's Salary Compensation Organization and was later used to house the instructors for the Training Organization located in Building 131.

Trailer T303E

The trailer was used throughout the site for a variety of field administrative uses. These uses included being used by the emergency preparedness group and as a field office trailer for a variety of short-term field operations. When not in use the trailer is stored in the 130 SY Storage Yard. Mr. Padilla used the trailer as a field trailer to complete paperwork and perform various administrative activities for the transportation department in the early 2000s. T303E is normally stored in the 130SY Storage Yard when not in us on a short-term field project. Currently this trailer is being stored (and not currently operational) southeast of Building 771

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130SY StorageYard

The 130 SY Storage Yard was originally used to stage and store stocks of stainless steel, iron and other material that was machined milled and consumed at Rocky Flats. The east and west part of the yard is currently used to stage empty cargo containers awaiting transfer to various on-site buildings. Waste management uses the north part of the yard to stage filled and empty cargo waste containers, and PU&D uses the northwest portion of the yard to stage equipment destined for offsite disposal or re-sale. KH construction uses the southwest portion of the yard as a general lay-down area.

Current Operational Status

The 130 Administrative Building, 130 Cafeteria, 130 Warehouse, Building 131, Trailer T131A and the 130SY Storage Yard are all active. Trailer T303E is not active.

Contaminants of Concern

Asbestos

Describe any potential, likely, or known sources of Asbestos:

None of the buildings addressed in this HSA have an asbestos posting. None of the buildings in this HSA have had a comprehensive building inspection.

Beryllium (Be)

Describe any potential, likely, or known Be production or storage locations:

None of the buildings addressed in this HSA are on the list of Be areas.

Summarize any recent Be sampling results:

There have been no recent Be samples collected on any of these facilities.

Lead

Describe any potential, likely, or known sources of Lead (e.g., paint, shielding, etc.):

Based on the age of the buildings addressed in this HSA lead in paint should not be a concern. No processes containing lead were conducted in these facilities. However, the 130 SY Storage Yard has a battery spill in 1993. See PAC 100-613, "Asphalt Surface in Lay-down Yard North of Building 130".

RCRA/CERCLA Constituents

Describe any potential, likely, or known sources of RCRA/CERCLA constituents (e.g., chemical storage, waste storage, and processes):

In early September 2002, the Chemical Dispensary and RCRA Unit 18.03 was also moved to the 130 Warehouse from Building 551. On occasion cargo containers containing low levels of radiological material was staged by material stewardship in this lay-down yard prior to being shipped off site. There is no evidence of contamination associated with this activity.

See the Historical operations section above for a more detailed listing of the operations which occurred in the facilities addressed in this HSA.

In 1993 several batteries fell off the pallet they where being moved on. This incident is documented in PAC 100-613, "Asphalt Surface in Lay-down Yard North of Building 130".

Describe any potential, likely, or known spill locations (and sources, if any):

In 1993 several batteries fell off the pallet they where being moved on. This incident is documented in PAC 100-613, "Asphalt Surface in Lay-down Yard North of Building 130".

Describe methods in which spills were mitigated, if any:

Material was neutralized using Sodium Bicarbonate and was placed in a 90 storage area until disposed of.

PCBs

Describe any potential, likely, or known sources of PCBs (e.g., light ballasts, paints, equipment, etc.):

None of the facilities addressed in this HSA have a history of housing any PCB continuing processes. Based on the age of construction these buildings, PCBs in paint should not be a concern.

Describe any potential, likely, or known spill locations (and sources, if any):

No PCB spills occurred in any of the facilities addressed in this HSA.

Describe methods in which spills were mitigated, if any:

No PCB spills occurred in any of the facilities addressed in this HSA.

Radiological Contaminants

Describe any potential, likely, or known radiological production or storage locations:

The 130 Warehoused has two RMAs. One was established to handles the shipping of laundry to an offsite vendor and the other was established to handle the occasional non-routine shipping of a sealed source or other small quantity of low level radiological material, which was not shipped directly off site by the Traffic Department. On occasion cargo containers containing low levels of radiological material was staged by material stewardship in the 130SY Storage Yard prior to being shipped off site. There is no evidence of contamination associated with this activity. The remaining buildings in this HSA have no history of radiological operation.

See the Historical operations section above for a more detailed listing of the operations, which occurred in the facilities addressed in this HSA.

Describe any potential, likely, or known spill locations (e.g., known leaking sealed radioactive sources, leaking waste drums, potentially contaminated drains, etc.):

None

Describe methods in which spills were mitigated, f any:

None

Describe any potential, likely, or known isotopes of concern (e.g., weapons grade plutonium, uranium isotopes, pure beta emitters, mixed fission products, etc.):

None

Describe any potential, likely, or known external facility contamination (e.g., stack release points, unfiltered ventilation, facility's physical location to known site releases, etc.):

See section below for information on IHSSs PACs, and UBCs.

Environmental Restoration Concerns

Describe any ER concerns that could affect facility characterization (e.g., IHSSs, PACs, UBCs):

The 130 SY Storage Yard is associated with the following PAC:

1) See PAC 100-613, "Asphalt Surface in Lay-down Yard North of Building 130", Active.

The remaining facilities addressed in this HSA are not associated with any IHSSs, PACs, or UBCs.

Additional Information

Describe any additional information that may be useful during facility characterization (e.g., contaminant migration routes, waste handling operations, physical hazards, Historical Release Reports, WSRIC data, etc.):

None

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D&D RISS Facility Characterization
Historical Site Assessment Report
September, 2002 Rev. 0

References

Provide all sources of information utilized to gather data for facility history (e.g., documents, files, interviews):

Sources reviewed to complete this HSA were the RFETS Facility List, the Historical Release Report, Site Master List of RCRA Units, and the Site IHSS, PAC, and UBC databases. The WSRIC for those buildings with a WSRIC. In addition, a facility walkdown and interviews were performed.

Waste Volume Estimates and Material Types

Facility	Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM (cu ft)	Other Waste (cu ft)
Building 130	10,600	0	24,500	0	6,800	TBD	Built-up Roofing 9,600 cu ft.
Building 130 Cafeteria	2,900	0	7,200	0	1,700	TBD	Built-up Roofing 2,600 cu ft.
Building 130 Warehouse	5,900	0	15,250	0	1,200	TBD	Built-up Roofing 5,200 cu ft.
Building 131	5,300	0	12,250	0	3,400	TBD	Built-up Roofing 4,800 cu ft.
Trailer T131A	0	700	700	750	800	TBD	N/A
Trailer T303E	0	100	100	100	50	TBD	N/A
130SY StorageYard	0	0	1200	0	0	TBD	Asphalt – 20,000 cu ft.

Further Actions

Recommend any further actions, if any (e.g., characterization, decontamination, special handling, etc.):

Begin the RLC/PDS process.

Note:

This HSA was performed prior to SME walkdowns, and chemical and radiological characterization package preparations. SMEs should evaluate and/or verify all information during the RLC/PDS process. SMEs may need to review additional documentation and perform additional interviews. Information contained in this HSA only represents a "snapshot" in time. Subsequent data may be obtained during SME walkdowns and chemical and radiological characterization package preparations, which may conflict with this report. However, this report will not be amended, and the newer data will take precedence over the data in this report. Newer Data will appear in the RLCR/PDSR.

Prepared By: Doug Bryant / [signature] / September 2002

Name / Signature / Date

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ATTACHMENT C

Radiological Data Summaries and Survey Maps

SURVEY UNIT T131A-5-005
RADIOLOGICAL DATA SUMMARY - PDS

Survey Unit Description: T131A (Interior)

24

Total Surface Activity Measurements

	25 Number Required	25 Number Obtained	
MIN	-14.5		dpm/100 cm^2
MAX	34.4		dpm/100 cm^2
MEAN	7.1		dpm/100 cm^2
STD DEV	12.4		dpm/100 cm^2
TRANSURANIC DCGL$_W$	100		dpm/100 cm^2

Removable Activity Measurements

	25 Number Required	25 Number Obtained	
MIN	-0.9		dpm/100 cm^2
MAX	2.7		dpm/100 cm^2
MEAN	-0.3		dpm/100 cm^2
STD DEV	0.9		dpm/100 cm^2
TRANSURANIC DCGL$_W$	20		dpm/100 cm^2

25

SURVEY UNIT T131A-5-005
TSA - DATA SUMMARY

Manufacturer:	NE Tech	NE Tech
Model:	DP-6	DP-6
Instrument ID#:	1	2
Serial #:	3250	3104
Cal Due Date:	7/13/03	5/11/03
Analysis Date:	2/20/03	2/20/03
Alpha Eff. (c/d):	0.219	0.222
Alpha Bkgd (cpm)	1.3	4.7
Sample Time (min)	1.5	1.5
LAB Time (min)	1.5	1.5
MDC (dpm/100cm^2)	48.0	48.0

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm2)	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm2)	Sample Net Activity (dpm/100cm2)[1,2]
1	2	2.0	9.0	3.3	14.9	-11.4
2	1	8.0	36.5	6.7	30.6	16.2
3	1	12.0	54.8	6.7	30.6	34.4
4	1	8.7	39.7	6.0	27.4	19.4
5	1	10.0	45.7	8.0	36.5	25.3
6	2	7.3	32.9	2.0	9.0	12.5
7	2	5.3	23.9	4.0	18.0	3.5
8	1	6.7	30.6	7.3	33.3	10.2
9	2	6.0	27.0	4.0	18.0	6.7
10	2	5.3	23.9	2.0	9.0	3.5
11	1	9.3	42.5	5.3	24.2	22.1
12	1	7.3	33.3	6.0	27.4	13.0
13	2	5.3	23.9	2.7	12.2	3.5
14	1	6.7	30.6	6.7	30.6	10.2
15	1	5.3	24.2	7.3	33.3	3.8
16	2	4.7	21.2	4.0	18.0	0.8
17	2	2.7	12.2	1.3	5.9	-8.2
18	2	2.0	9.0	1.3	5.9	-11.4
19	1	4.0	18.3	4.0	18.3	-2.1
20	2	1.3	5.9	2.7	12.2	-14.5
21	2	4.7	21.2	2.7	12.2	0.8
22	2	4.0	18.0	4.0	18.0	-2.4
23	1	9.3	42.5	6.0	27.4	22.1
24	1	4.7	21.5	0.7	3.2	1.1
25	1	8.7	39.7	7.3	33.3	19.4

1 - Average LAB used to subtract from Gross Sample Activity

20.4	Sample LAB Average
MIN	-14.5
MAX	34.4
MEAN	7.1
SD	12.4
Transuranic DCGL$_W$	100

QC Measurements

11 QC	2	3.3	14.9	1.3	5.9	-3.4
6 QC	1	7.3	33.3	6.7	30.6	15.1

1 - Average QC LAB used to subtract from Gross Sample Activity

18.2	QC LAB Average
MIN	-3.4
MAX	15.1
MEAN	5.9
Transuranic DCGL$_W$	100

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SURVEY UNIT T131A-5-005
RSC - DATA SUMMARY

Manufacturer:	Eberline	Eberline	Eberline	Eberline
Model:	SAC-4	SAC-4	SAC-4	SAC-4
Instrument ID#:	3	4	5	6
Serial #:	767	1164	833	952
Cal Due Date:	5/13/03	6/17/03	2/28/03	7/9/03
Analysis Date:	2/20/03	2/20/03	2/20/03	2/20/03
Alpha Eff. (c/d):	0.33	0.33	0.33	0.33
Alpha Bkgd (cpm)	0.2	0.1	0.3	0.0
Sample Time (min)	2	2	2	2
Bkgd Time (min)	10	10	10	10
MDC (dpm/100cm^2)	9.0	9.0	9.0	9.0

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm^2)
1	3	0	-0.6
2	4	0	-0.3
3	5	1	0.6
4	6	0	-0.9
5	3	1	0.9
6	4	0	-0.3
7	5	0	-0.9
8	6	0	-0.9
9	3	0	-0.6
10	4	0	-0.3
11	5	0	-0.9
12	6	0	-0.9
13	3	0	-0.6
14	4	2	2.7
15	5	1	0.6
16	6	0	-0.9
17	3	0	-0.6
18	4	1	1.2
19	5	0	-0.9
20	6	0	-0.9
21	3	0	-0.6
22	4	0	-0.3
23	5	0	-0.9
24	6	0	-0.9
25	3	0	-0.6
		MIN	-0.9
		MAX	2.7
		MEAN	-0.3
		SD	0.9
		Transuranic DCGL$_w$	20

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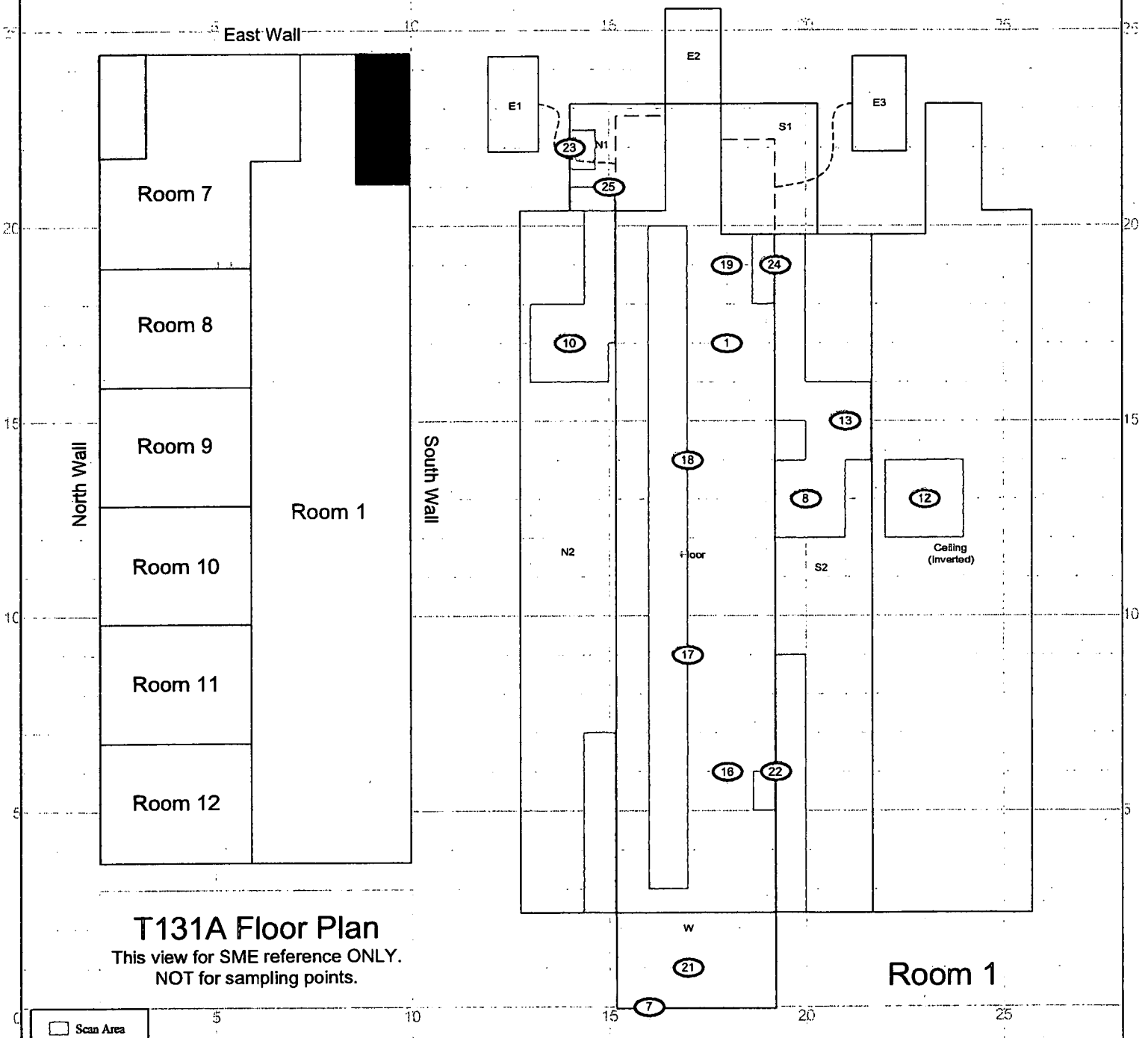
TYPE 1 RLC SURVEY FOR AREA 5, GROUP 5

Survey Area: 5 **Survey Unit: T131A-5-005** **Classification: 3**
Building: T-131-A
Survey Unit Description: Trailor Interior
Total Area: 661 sq. m. **Total Floor Area: 160 sq. m.**



T131A Floor Plan

This view for SME reference ONLY.
NOT for sampling points.

Room 1

Scan Area

SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 15
0 METERS 5

1 inch = 12 feet 1 grid sq. = 1 sq. m.

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):
1,2

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 Prepared for:

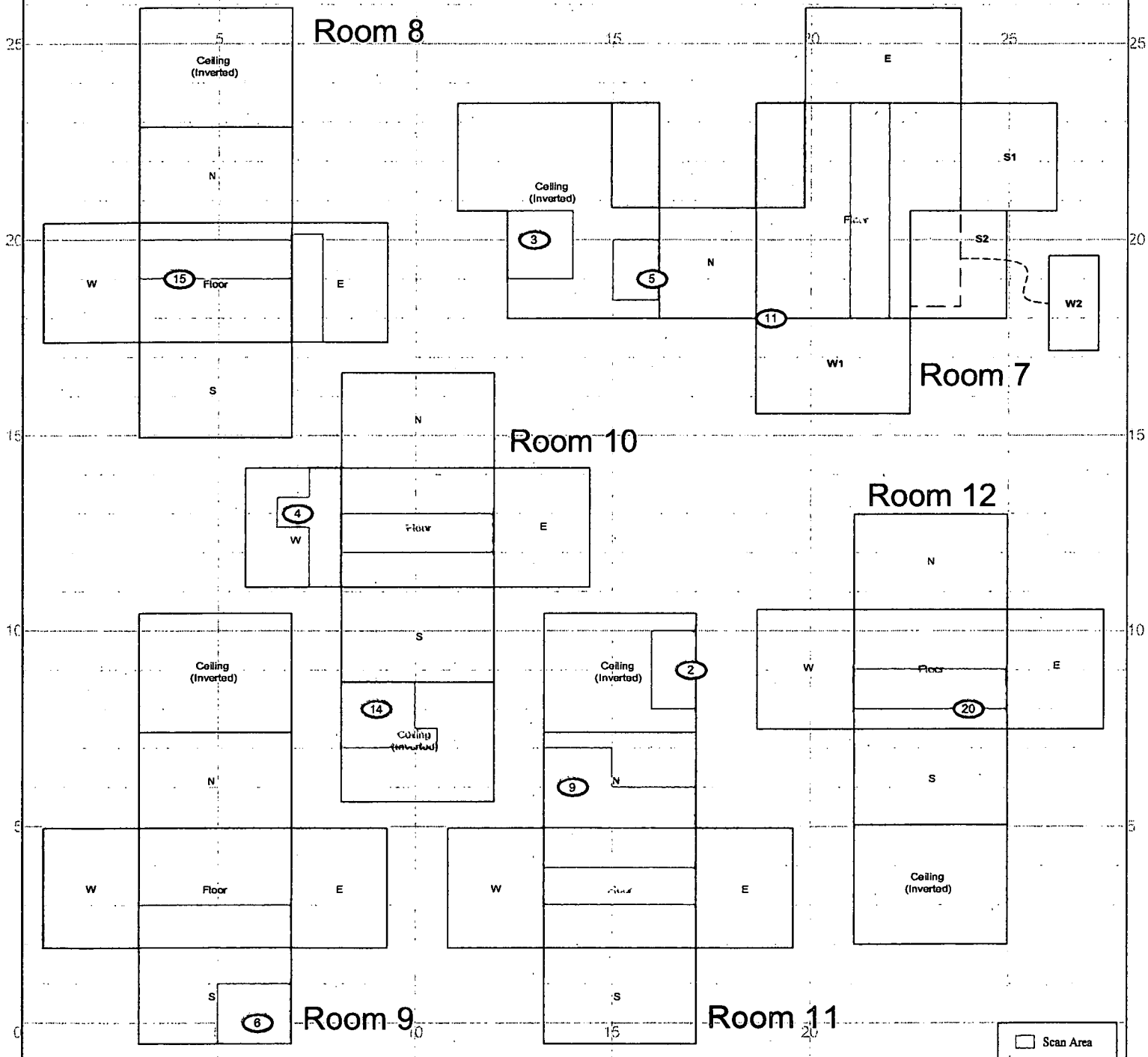
DynCorp
THE ART OF TECHNOLOGY

KAISER HILL

MAP ID: 03-0204\T131A PG1 Feb. 24, 2003

TYPE 1 RLC SURVEY FOR AREA 5, GROUP 5

Survey Area: 5 **Survey Unit: T131A-5-005** **Classification: 3**
Building: T-131-A
Survey Unit Description: Trailor Interior
Total Area: 661 sq. m. **Total Floor Area: 160 sq. m.**



SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 15
0 METERS 5

1 inch = 12 feet 1 grid sq. = 1 sq. m.

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):
1,2

U.S. Department of Energy
Rocky Flats Environmental Technology Site

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DynCorp
THE ART OF TECHNOLOGY

KAISER-HILL

MAP ID: 03-0204\T131A PG2 Feb. 24, 2003

ATTACHMENT D

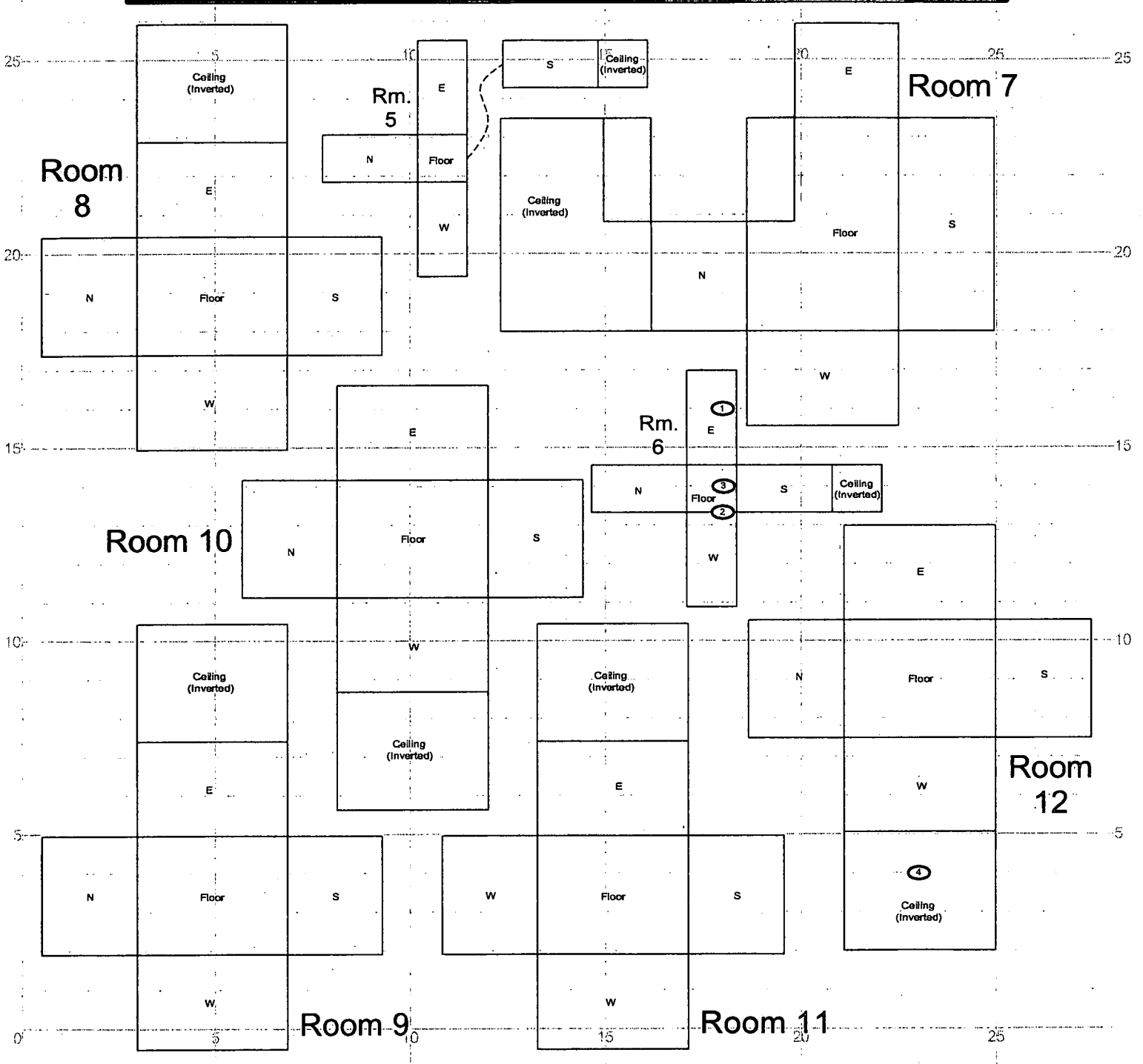
Chemical Data Summaries and Sample Maps

Asbestos Data Summary

Sample Number	Map Survey Location	Room	Material Sampled and Location	Analytical Results
Building T131A – RIN 03Z1087				
T131A-030303-315-201	1	6	Drywall only	None Detected
T131A-030303-315-202	2	6	Base cove and yellow adhesive	None Detected
T131A-030303-315-203	3	6	Gray and white linoleum and yellow adhesive	None Detected
T131A-030303-315-204	4	12	2' x 4' white acoustical drop ceiling tile with small "worm" pattern	None Detected

CHEMICAL SAMPLE MAP

Building T131A
Asbestos



SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 15

0 METERS 5

1 inch = 12 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

DynCorp
THE ART OF TECHNOLOGY

Prepared for: KAISER HILL

MAP ID: 03-0204\T131A PG2-Asb

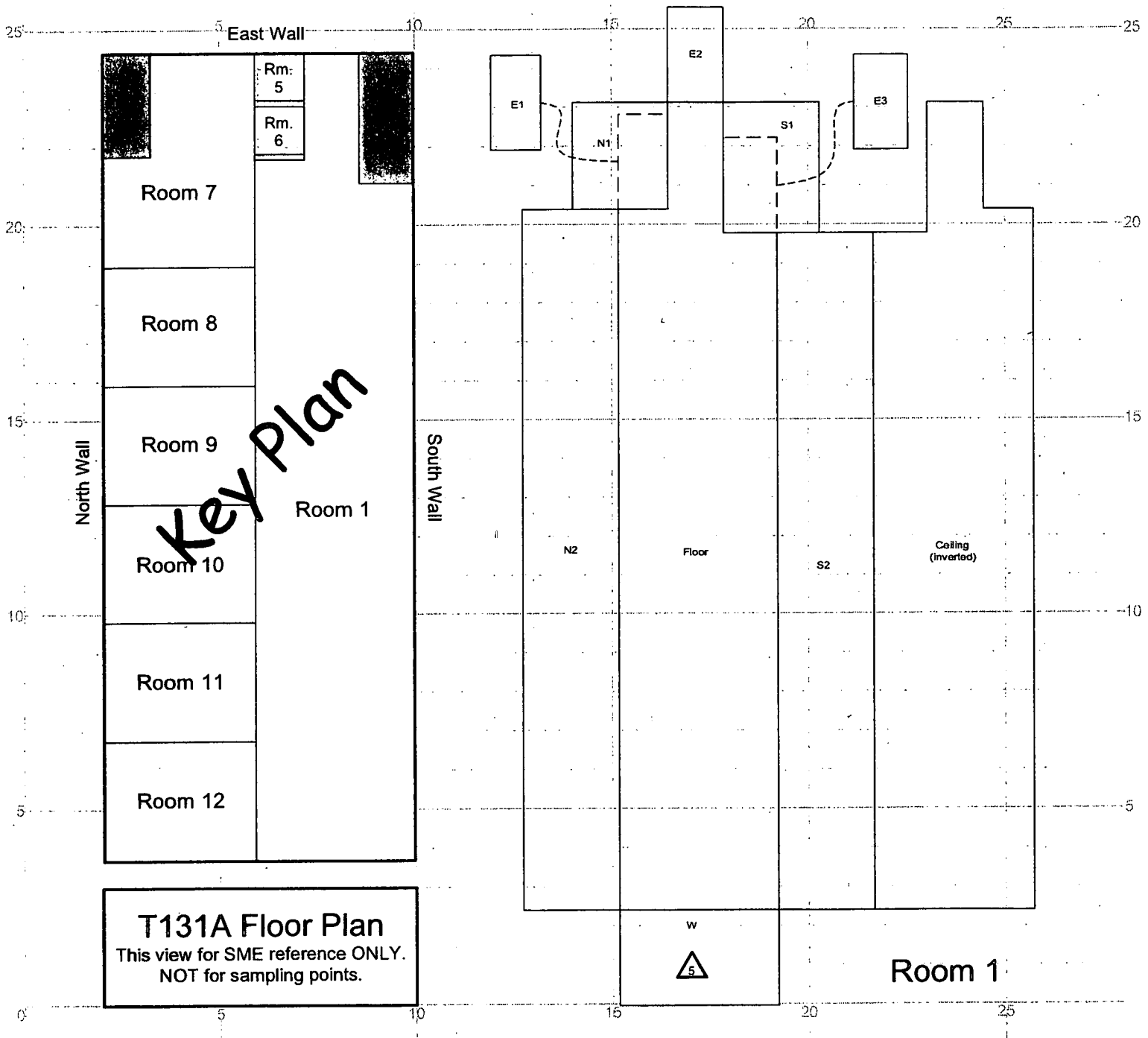
March 4, 2003

Beryllium Data Summary

Sample Number	Map Survey Point Location	Room	Sample Location	Result ($ug/100\ cm^2$)
Building T131A – RIN 03Z1088				
T131A-030303-315-101	1	8	On north window sill	< 0.1
T131A-030303-315-102	2	5	On electrical box	< 0.1
T131A-030303-315-103	3	7	On edge of Bellheimer file cabinet	< 0.1
T131A-030303-315-104	4	12	On HVAC diffuser louvers	< 0.1
T131A-030303-315-105	5	1	On angle iron brace	< 0.1

CHEMICAL SAMPLE MAP

Building T131A
Beryllium



T131A Floor Plan
This view for SME reference ONLY.
NOT for sampling points.

SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 15
0 METERS 5

1 inch = 12 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

DynCorp
THE ART OF TECHNOLOGY

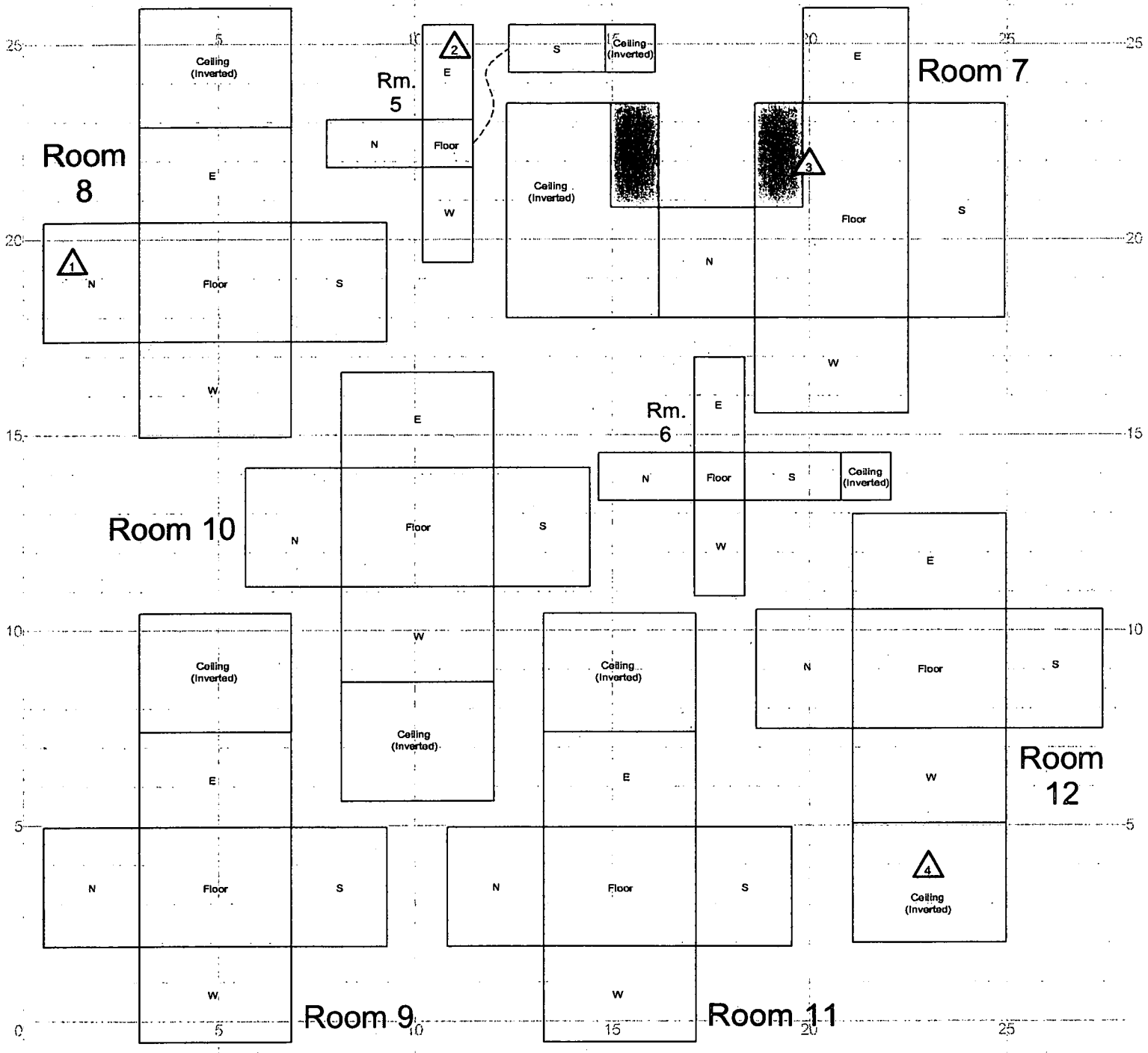
Prepared for: KAISER HILL

MAP ID: 03-0204\T131A PG1-BE

March 4, 2003

CHEMICAL SAMPLE MAP

Building T131A
Beryllium



SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 15

0 METERS 5

1 inch = 12 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

DynCorp
THE ART OF TECHNOLOGY

KAISER HILL

MAP ID: 03-0204\T131A PG2-Be

March 4, 2003

ATTACHMENT E

Data Quality Assessment (DQA) Detail

DATA QUALITY ASSESSMENT (DQA)

VERIFICATION & VALIDATION OF RESULTS

V&V of the data confirm that appropriate quality controls are implemented throughout the sampling and analysis process, and that any substandard controls result in qualification or rejection of the data in question. The required quality controls and their implementation are summarized in a tabular, checklist format for each category of data – radiological surveys and chemical analyses (specifically asbestos and beryllium).

DQA criteria and results are provided in a tabular format for each suite of surveys or chemical analyses performed; the radiological survey assessment is provided in Table E-1, asbestos in E-2, and beryllium in E-3. A data completeness summary for all results is given in Table E-4.

All relevant Quality records supporting this report are maintained in the RISS Characterization Project Files. This report will be submitted to the CERCLA Administrative Record for permanent storage within 30 days of approval by the Regulators. All radiological data are organized into Survey Packages, which correlate to unique (MARSSIM) Survey Units. Chemical data are organized by RIN (Report Identification Number) and are traceable to the sample number and corresponding sample location.

Beta/gamma survey designs were not implemented for Building T131A based on the conservatism of the transuranic limits used as DCGLs in the unrestricted release decision process. Survey designs were implemented based on the transuranic limits used as DCGLs in the unrestricted release decision process. All survey results were evaluated against, and were less than the Transuranic $DCGL_w$ (100 dpm/100cm^2) and the Uranium $DCGL_w$ (5,000 dpm/100cm^2) unrestricted release limits.

Consistent with EPA's G-4 DQO process, the radiological survey design (for those survey units performed per PDS requirements) was optimized by checking actual measurement results (acquired during pre-demolition surveys) against model output with original estimates. Use of actual sample/survey (result) variances in the MARSSIM DQO model confirms that an adequate number of surveys were acquired.

SUMMARY

In summary, the data presented in this report have been verified and validated relative to the quality requirements and project decisions as stated in the original DQOs. All data are useable based on qualifications stated herein and are considered satisfactory without qualification. All media surveyed and sampled yielded results less than their associated action levels and with acceptable certainties.

All beryllium results were less than associated action levels (0.2 µg/100cm^2) also confirming a Type 1 facility classification.

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Based upon an independent review of the radiological data, it is determined that the original project DQOs satisfied MARSSIM guidance. All facility contamination levels were below applicable unrestricted release levels. Minimum survey requirements were met, sampling/survey protocol was performed in accordance with applicable procedures, survey units were properly designed and bounded, and instrument performance and calibration was verified as acceptable. All radiological results meet the PDS unrestricted release criteria.

Chain of Custody was intact; documentation was complete, hold times were acceptable (where applicable,) and packaging integrity/custody seals were maintained throughout the sampling/analysis process. Level 2 Isolation Controls have been posted to prevent the inadvertent introduction of contamination into the facility. On this basis, Building T131A meets the unrestricted release criteria with the confidences stated herein.

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Table E-1 V&V of Radiological Surveys – Building T131A

V&V CRITERIA, RADIOLGICAL SURVEYS		K-H RSP 16.00 Series MARSSIM (NUREG-1575)		
QUALITY REQUIREMENTS				
	Parameters	**Measure**	**frequency**	**COMMENTS**
ACCURACY	initial calibrations	90%<x<110%	≥1	Multi-point calibration through the measurement range encountered in the field; programmatic records.
	daily source checks	80%<x<120%	≥1/day	Performed daily/within range.
	local area background: Field	typically < 10 dpm	≥1/day	All local area backgrounds were within expected ranges (i.e., no elevated anomalies.)
PRECISION	field duplicate measurements for TSA	≥5% of real survey points	≥10% of reals	N/A
REPRESENTATIVENESS	MARSSIM methodology: Survey Units T131A-5-005 (interior) and EXT-B-001 (exterior).	statistical and biased	NA	Random w/ statistical confidence.
	Survey Maps	NA	NA	Random and biased measurement locations controlled/mapped to ±1m.
	Controlling Documents (Characterization Pkg; RSPs)	qualitative	NA	Refer to the Characterization Package (planning document) for field/sampling procedures (located in Project files); thorough documentation of the planning, sampling/analysis process, and data reduction into formats.
COMPARABILITY	units of measure	dpm/100cm^2	NA	Use of standardized engineering units in the reporting of measurement results.
COMPLETENESS	Plan vs. Actual surveys usable results vs. unusable	>95% >95%	NA	See Table E-4 for details.
SENSITIVITY	detection limits	TSA: ≤50 dpm/100cm^2 RA: ≤10 dpm/100cm^2	all measures	MDAs ≤ 50% $DCGL_w$ per MARSSIM guidelines.

Table E-2 V&V of Asbestos Results – Building T131A

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		
ASBESTOS	METHOD: EPA 600/R-93/116	LAB ---->	Reservoirs Environmental, Inc	
QUALITY REQUIREMENT		RIN ---->	RIN03Z1087	
		Measure	Frequency	COMMENTS
ACCURACY	Calibrations: Initial/continuing	below detectable amounts	≥1	Semi-quantitative, per (microscopic) visual estimation.
PRECISION	Actual Number Sampled LCSD Lab duplicates	all below detectable amounts	≥ 4 samples	Semi-quantitative, per (microscopic) visual estimation.
REPRESENTATIVENESS	COC	Qualitative	NA	Chain-of-Custody intact: completed paperwork, containers w/ custody seals.
	Hold times/preservation	Qualitative	NA	N/A
	Controlling Documents (Plans, Procedures, maps, etc.)	Qualitative	NA	See original Chemical Characterization Package (planning document); for field/sampling procedures (located in project file;) thorough documentation of the planning, sampling/analysis process, and data reduction into formats.
COMPARABILITY	Measurement Units	% by bulk volume	NA	Use of standardized engineering units in the reporting of measurement results.
COMPLETENESS	Plan vs. Actual samples Usable results vs. unusable	Qualitative	NA	See Table E-4; final number of samples at Certified Inspector's discretion.
SENSITIVITY	Detection limits	<1% by volume	all measures	N/A

Table E-3 V&V of Beryllium Results – Building T131A

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		
BERYLLIUM	**Prep: NMAM 7300** **METHOD: OSHA ID-125G**	**LAB ---->**	Johns Manville, Littleton, Co.	
QUALITY REQUIREMENTS		**RIN ---->**	RIN03Z1088	
		Measure	**Frequency**	**COMMENTS**
ACCURACY	**Calibrations** Initial	Linear calibration	≥1	No qualifications significant enough to change project decisions i.e., classification of a Type 1 facility confirmed. All results were below associated action levels.
	Continuing	80%<%R<120 %	≥1	
	LCS/MS	80%<%R<120 %	≥1	
	Blanks - lab & field	<MDL	≥1	
	interference check std (ICP)	NA	NA	
PRECISION	LCSD	80%<%R<120 % (RPD<20%)	≥1	
	field duplicate	all results < RL	≥1	
REPRESENTATIVENESS	COC	Qualitative	NA	
	hold times/preservation	Qualitative	NA	
	Controlling Documents (Plans, Procedures, maps, etc.)	Qualitative	NA	
COMPARABILITY	measurement units	ug/100cm^2	NA	
COMPLETENESS	Plan vs. Actual samples usable results vs. unusable	>95% >95%	NA	
SENSITIVITY	detection limits	MDL of 0.012 ug/100cm^2	all measures	

Table E-4 Data Completeness Summary – Building T131A

ANALYTE	Building/Area /Unit	Sample Number Planned (Real & QC)[A]	Sample Number Taken (Real & QC)	Project Decisions (Conclusions) & Uncertainty	Comments (RIN, Analytical Method, Qualifications, etc.)
Asbestos	T131A (interior)	4 biased	4 biased	No ACM present, all results < 1% by volume	40 CFR763.86; 5 CCR 1001-10; EPA 600/R-93/116 RIN03Z1087
Beryllium	T131A (interior)	5 biased	5 biased	No beryllium contamination found, all results less than associated action levels	OSHA ID-125G RIN03Z1088 No results above action level (0.2ug/100cm^2) or investigative level (0.1 ug/100cm^2).
Radiological	Survey Area 3 Survey Unit: T131A-5-005 T131A (interior)	20 α TSA (15 random/5 biased) and 20 α Smears (15 random/5 biased) 5 α TSA and 5 α Smears Equipment 2 QC TSA 5% scan	20 α TSA (15 random/5 biased) and 20 α Smears (15 random/5 biased) 5 α TSA and 5 α Smears Equipment 2 QC TSA 5% scan	No elevated contamination found at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.

A - Asbestos Sample Number Planned is only an estimate, actual sample numbers are determined during the inspection.